

Application No.: 10/523,003RECEIVED  
CENTRAL FAX CENTERDocket No.: 4590-372

AUG 21 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

4. (new) An antenna for a sonar with synthetic antenna processing, comprising:  
a plurality of spaced out sensors distributed in a main zone in which the sensors are spaced out by a pitch  $d$  and at least in one zone located at one end of the antenna in which the sensors are spaced out by a pitch  $d'$  smaller than pitch  $d$ , said pitch  $d$  being defined so as to obtain the desired level of the grating lobe in the directivity pattern of a channel and said pitch  $d'$  being defined so as to obtain the desired precision for the self-calibration of the antenna, said self-calibration being made by the means of an inter-recurrences correlation.
5. (new) The antenna according to claim 4, in which the pitch  $d$  between sensors is reduced to  $d'$  at both end zones of the antenna with regard to said main zone.
6. (new) The antenna according to claim 4, in which the pitch  $d$  between sensors is reduced to  $d'$  at only one end zone of the antenna with regard to said main zone.
7. (new) The antenna according to claim 4, in which the pitch  $d$  is defined by the following formula:
- $$d \approx 0.7 \cdot \lambda / \Delta\theta$$
- in which  $\lambda$  represents the wavelength of the signal and  $\theta$  the bearing width of the transmission sector.
8. (new) The antenna according to claim 7, in which the pitch  $d'$  is determined so that the report  $d/d'$  is at least greater than 1.5.

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9. (new) The antenna according to claim 8, in which the pitch  $d$  between sensors is reduced to  $d'$  at both end zones of the antenna with regard to said main zone.

10. (new) The antenna according to claim 8, in which the pitch  $d$  between sensors is reduced to  $d'$  at only one end zone of the antenna with regard to said main zone.